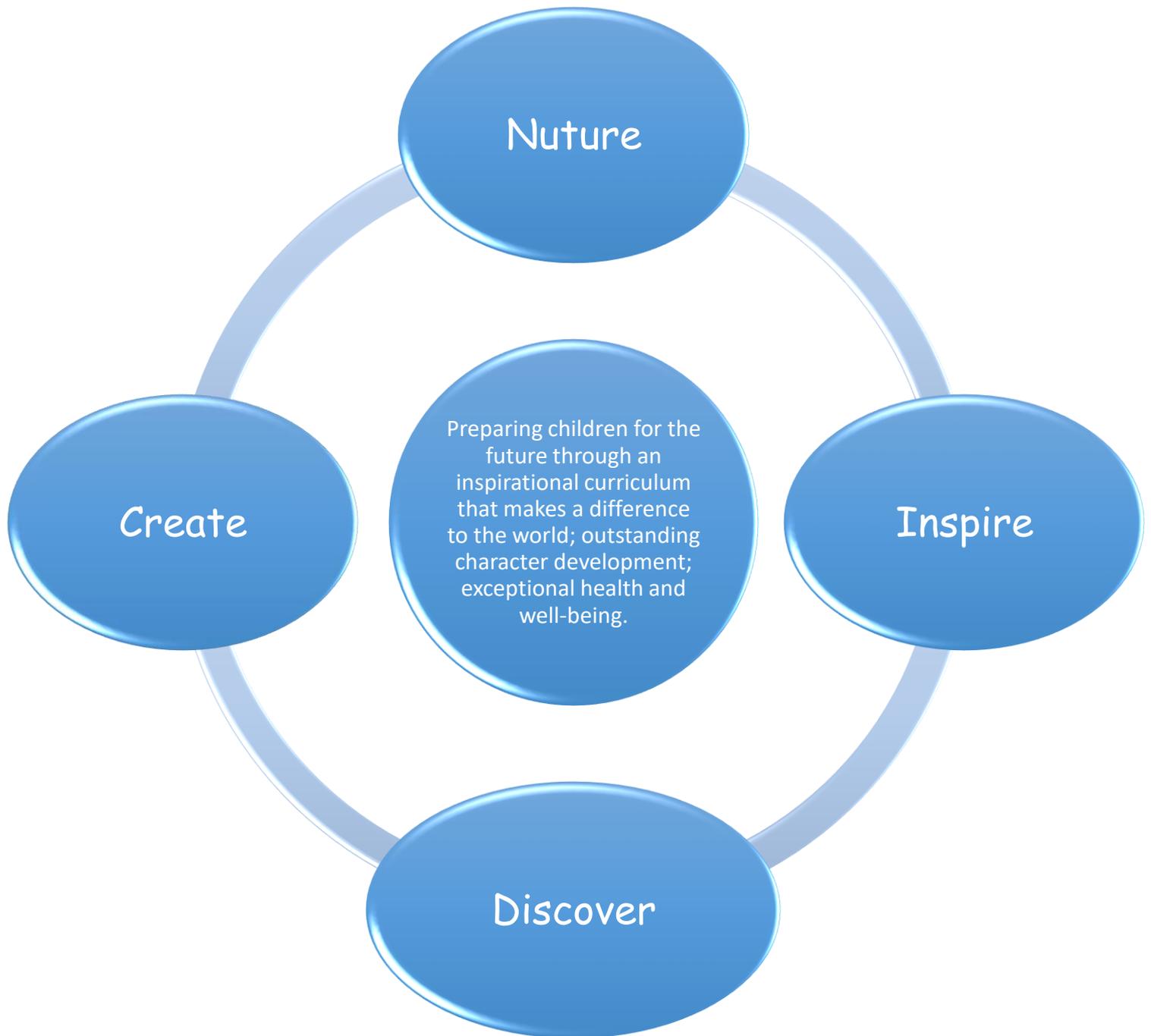




Stathern Primary School
'Nurture, Inspire, Discover, Create'

Computing Curriculum Vision and Skills





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Intent and Design – What are we trying to achieve?

Vision

• **As a school we aim to:**

- Preparing children for the future through an inspirational curriculum that makes a difference to the world; outstanding character development; exceptional health and well-being.

• **In Computing, we aim to:**

- engage, inspire and challenge children to use computational thinking and creativity to understand and change the world.

Motto

- **Nurture** – We care for each other and celebrate our differences, achievements and contributions to the world. We support each other through challenges and difficulties, recognising that the mental health and well-being of both ourselves and those around us is one of the key factors in our happiness and success.

- **Inspire** – We inspire each other to greater heights through our communication, actions, support and achievements. We take inspiration from the people, places and events all around us. We recognise that whether a situation is good or bad, there is always learning and growth to be gained. These situations inspire us to make positive change a reality.

- **Discover** – We are excited to discover new knowledge, skills, people and places. We are open to alternative ideas beyond our own and enjoy exploring the thoughts, conversations and solutions that others bring to different situations and experiences.

- **Create** – We enjoy working together to create new and exciting solutions to make our world a better place. We believe we can make a difference no matter how large or small. Our school is a place where we can experiment and take risks in order that we might better ourselves and the world we live in.

School Values

- We believe in...

- **Developing outstanding character** and attitudes to learning in preparation for future challenges in a changing world.

- **Promoting physical and mental health** in a happy caring environment that is supportive and encouraging.

- **Making a difference** to the world we live in through creating enterprising solutions to local and global issues.

- Developing social skills and an appreciation of **each person's unique strengths**, respecting and embracing different cultures, races and religions.

- Fostering a **deep sense of care and nurture** for the world we live in and the people around us.

- Creating a broad range of **inspiring experiences** that allows children to develop skills and find their place in the world.

- Working in **partnership with our school community and beyond to build brighter futures**.

- High expectations alongside a **culture of self-awareness, reflection and self-improvement**.

Aims of our Computing Curriculum

- **Our inspirational Computing curriculum will enable**

- Here at Stathern, we understand the vital role that computing plays in ensuring pupils become digitally literate at a level suitable for the future workplace and as active participants in the digital world. Through out teaching, pupils will be taught the key principles of information and computation, how digital systems work and how to put this knowledge to use through programming. It is our ethos and belief that pupils build on this knowledge and understanding in order for them to be proficient in using information technology to create programs, systems and a range of content. Pupils here at Stathern will also learn about how computing has deep links with mathematics, science and design and technology.

Learning Intentions

- Our Computing curriculum is designed to allow pupils to embody creativity. The curriculum is broken into topics that are taught progressively across both key stages.

- We aim to provide a curriculum where pupils:

- understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

- analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems

- evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

- are responsible, competent, confident and creative users of information and communication technology.



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Implementation and Organisation – How will we arrange our learning?

School Focus

Reading Challenge Vocabulary and Communication Progressive Skills Transferable skills Positive Mental Health and wellbeing

PSHCE Developmental Foci

- Texts in Computing are critically challenged, understood and discussed for meaning and moral messages
- Lessons are planned to challenge pupils both academically and developmentally
- Children are able to use the correct vocabulary to discuss emotions and themselves. They can discuss and reflect on their ideas with clarity.
- A Computing specific, progressive and challenging skill set is explicitly taught and assessed
- Work written and recorded in Art and Design must reflect and reinforce the key skills in Reading, Writing and Maths
- Our Computing curriculum supports SEMH by explicitly teaching children about themselves, their relationships, their Health and their Wellbeing

Contexts

Exciting, topic-based learning supported by a rich and diverse array of texts and activities.

Big questions in topics and Art and Design specific areas

	Y1/2	Y3/4	Y5/6	
Skills Progressions	Algorithms and Reasoning		Reasoning	School Values British Values
	Creating Program		Creating Program, Developing Programs, Using Programs	
	Using Technology		Networks and Search Engines	
	Uses of Technology beyond School and Safe Use		Safe Use	



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Algorithms and Reasoning			
YR	Y1/2	Y3/4	Y5/6
	<p>Year 1</p> <ul style="list-style-type: none"> • create a series of instructions and plan a journey for a programmable toy <p>Year 2</p> <ul style="list-style-type: none"> • understand that algorithms are used on digital devices • predict what the outcome of a simple program will be (logical reasoning). 	<p>Year 3</p> <ul style="list-style-type: none"> • discern when it is best to use technology and where it adds little or no value <p>Year 4</p> <ul style="list-style-type: none"> • make an accurate prediction and explain why they believe something will happen (linked to programming) 	<p>Year 5</p> <ul style="list-style-type: none"> • analyse and evaluate information reaching a conclusion that helps with future developments <p>Year 6</p> <ul style="list-style-type: none"> • design algorithms that use repetition and 2-way selection

Creating, Developing and Using Programs			
YR	Y1/2	Y3/4	Y5/6
	<p>Year 1</p> <ul style="list-style-type: none"> • create, store and retrieve digital content <p>Year 2</p> <ul style="list-style-type: none"> • write a simple program and test it 	<p>Year 3</p> <ul style="list-style-type: none"> • write programs that accomplish specific goals • design a sequence of instructions, including directional instructions • understand what computer networks do and how they provide multiple services <p>Year 4</p> <ul style="list-style-type: none"> • give an 'on-screen' robot specific instructions that takes them from A to B • experiment with variables to control models • produce and upload a podcast 	<p>Year 5</p> <ul style="list-style-type: none"> • use technology to control an external device • develop a program that has specific variables identified • combine sequences of instructions and procedures to turn devices on and off <p>Year 6</p> <ul style="list-style-type: none"> • write a program that combines more than one attribute Developing Programs • develop a sequenced program that has repetition and variables identified Using Programs • present the data collected in a way that makes it easy for others to understand



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Using Technology, Networks and Search Engines			
YR	Y1/2	Y3/4	Y5/6
<ul style="list-style-type: none"> recognise that a range of technology is used in places such as homes and schools select and use technology for particular purposes. 	<p>Year 1</p> <ul style="list-style-type: none"> use a website and a camera record sound and play back <p>Year 2</p> <ul style="list-style-type: none"> understand that programs require precise instructions organise, retrieve and manipulate digital content 	<p>Year 3</p> <ul style="list-style-type: none"> navigate the web to complete simple searches use a range of software for similar purposes collect and present information know how to search for specific information and know which information is useful and which is not Search engines select and use software to accomplish given goals <p>Year 4</p> <ul style="list-style-type: none"> know how to search for specific information and know which information is useful and which is not Search engines select and use software to accomplish given goals 	<p>Year 5</p> <ul style="list-style-type: none"> understand how search results are selected and ranked <p>Year 6</p> <ul style="list-style-type: none"> be aware that some search engines may provide misleading information

Technology Beyond School and Safe Use			
YR	Y1/2	Y3/4	Y5/6
<ul style="list-style-type: none"> recognise that a range of technology is used in places such as homes and schools 	<p>Year 1</p> <ul style="list-style-type: none"> talk about some of the IT uses in their own home use technology safely keep personal information private <p>Year 2</p> <ul style="list-style-type: none"> know how technology is used in school and outside of school know where to go for help if concerned 	<p>Year 3</p> <ul style="list-style-type: none"> use technology respectfully and responsibly Know different ways they can get help if concerned <p>Year 4</p> <ul style="list-style-type: none"> recognise acceptable and unacceptable behaviour using technology 	<p>Year 5</p> <ul style="list-style-type: none"> understand that they have to make choices when using technology and that not everything is true and/or safe <p>Year 6</p> <ul style="list-style-type: none"> be increasingly aware of the potential dangers in using aspects of IT and know when to alert someone if feeling uncomfortable



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Impact – How well are we achieving our aims?

Impact seen in:

Teacher Assessment

Pupil Voice

Moderation

Work scrutiny

Parental surveys and feedback

Observations and Blinks

Data analysis

Progress of pupils across the curriculum

Staff Questionnaires

Our children will:

Making great progress and have high standards of achievement and attainment

Have a lifelong love of reading and learning and be able to communicate clearly

Be respectful of themselves and demonstrate excellent behaviour

Be confident, positive and independent learners with high aspirations

Have mental wellbeing and make healthy lifestyle choices

Participate in the community and have excellent attendance

Work Sample Analysis:	What do our books show?
Lesson Observations:	How is the quality of teaching, learning and use of assessment in the lesson? How good is the questioning in the lesson?
Surveys:	What do parents and children say about this subject?
Interviews:	What do the children say about their learning in this subject? What do the staff say about their learning in this subject?
Coaching and Mentoring:	Is there a need for coaching and mentoring in this subject? What support do colleagues need in this subject?
Training:	What training has taken place? What is the impact of any training given?
Learning environment:	How does the learning environment support the learning in this subject area?